

## **APPENDIX ITR (Interconnection Trunking Requirements)**

## TABLE OF CONTENTS

1. INTRODUCTION .....	3
2. DIRECT END OFFICE TRUNKING .....	3
3. FORECASTING RESPONSIBILITIES .....	5
4. TRUNK DESIGN BLOCKING CRITERIA .....	7
5. TRUNK SERVICING .....	7
6. TRUNK DATA EXCHANGE .....	9
7. NETWORK MANAGEMENT.....	10

## **APPENDIX ITR**

### **Interconnection Trunking Requirements**

#### **1. INTRODUCTION**

- 1.1 This Appendix sets forth terms and conditions for Interconnection provided by TDS TELECOM and CLEC.
- 1.2 This Appendix provides descriptions of the trunking requirements between CLEC and TDS TELECOM. All references to incoming and outgoing trunk groups are from the perspective of CLEC. The paragraphs below describe the required and optional trunk groups for local and mass calling.
- 1.3 Local trunk groups may only be used to transport traffic between the Parties' End Users.

#### **2. DIRECT END OFFICE TRUNKING**

- 2.1 Direct End Office trunks terminate traffic from a CLEC switch to a TDS TELECOM End Office and are not switched at a Tandem location. The Parties shall establish a direct End Office trunk group when End Office traffic requires twenty-four (24) or more trunks. Overflow from either end of the direct End Office trunk group will be alternate routed to the appropriate Tandem. The Parties anticipate that the Direct End Office trunks will ride over existing facilities owned or controlled by, and at the expense of each Party on its respective side of the POI.
- 2.2 All traffic received by TDS TELECOM on the direct End Office trunk group from CLEC must terminate in the End Office, i.e. no Tandem switching will be performed in the End Office. All traffic received by CLEC on the direct End Office trunk group from TDS TELECOM must terminate in the End Office, i.e., no Tandem switching will be performed in the End Office. Where End Office functionality is provided in a remote End Office of a host/remote configuration, the Interconnection for that remote End Office is only available at the host switch. The number of digits to be received by the terminating Party shall conform to standard industry practices; but in no case shall the number of digits be less than seven (7).
- 2.3 TRUNK GROUPS
  - 2.3.1 TWO-WAY TRUNK GROUPS

2.3.1.1 Two-way trunk groups for local, IntraLATA and InterLATA traffic can be established between a CLEC switch and a TDS TELECOM End Office switch. This trunk group will utilize Signaling System 7 (SS7) or multi-frequency (MF) signaling protocol, with SS7 signaling preferred whenever possible. Two-way trunking will be jointly provisioned and maintained, and each Party shall be responsible for the costs on its side of the POI. For administrative consistency CLEC will have control for the purpose of issuing Access Service Requests (ASRs) on two-way groups. TDS TELECOM will use the Trunk Group Service Request (TGSR) as described in section 5.2 of this Appendix, to request changes in trunking. Both Parties reserve the right to issue ASRs, if so required, in the normal course of business.

2.3.1.2 The Parties agree to exchange traffic data on two-way trunks and to implement such an exchange within three (3) months of the date that two-way trunking is established and the trunk groups begin passing live traffic, or another date as agreed to by the Parties. Exchange of traffic data will permit each company to have knowledge of the offered and overflow load at each end of the two-way trunk group, and thereby enable accurate and independent determination of performance levels and trunk requirements. The Parties agree to the electronic exchange of data.

## 2.3.2 ONE-WAY TRUNK GROUPS

2.3.2.1 One-way trunk groups for ancillary services (e.g. mass calling) can be established between the Parties. Ancillary trunk groups will utilize Signaling System 7 (SS7) or multi-frequency (MF) signaling protocol, with SS7 signaling preferred whenever possible. The originating Party will have administrative control of one-way trunk groups.

2.3.2.2 Either Party may elect to provision its own one-way trunks for delivery of Local, IntraLATA and InterLATA Traffic, via separate trunk groups, to the other Party. If a Party elects to provision its own one-way trunks for Local Traffic, that Party will be responsible for all costs associated with establishing such trunks from its end-office switch to the appropriate switch of the other Party.

## 2.3.3 High Volume Call In (HVCI) / Mass Calling (Choke) Trunk Group:

2.3.3.1 If CLEC should acquire a HVCI/Mass Calling customer, i.e. a radio station, CLEC shall provide written notification to TDS



TELECOM. TDS TELECOM reserves the option to provide either a physical or "virtual" trunk group, with a virtual group preferred where technically feasible, for HVCI/Mass Calling Trunking.

- 2.4 Where available and upon the request of the other Party, each Party shall cooperate to ensure that its trunk groups are configured utilizing the B8ZS ESF protocol for 64 kbps Clear Channel Capability (64CCC) transmission to allow for ISDN interoperability between the Parties' respective networks. Trunk groups configured for 64CCC and carrying Circuit Switched Data (CSD) ISDN calls shall carry the appropriate Trunk Type Modifier in the CLCI-Message code. Trunk groups configured for 64CCC and not used to carry CSD ISDN calls shall carry a different appropriate Trunk Type Modifier in the CLCI-Message code.
- 2.5 The Parties agree to assign and utilize NPA-NXX codes in accordance with industry standards and applicable law.
- 2.6 TDS TELECOM will not block switched access customer traffic delivered to any TDS TELECOM Office for completion on CLEC's network. The Parties understand and agree that InterLATA trunking arrangements are available and functional only to/from switched access customers who directly connect with any TDS TELECOM End Office. TDS TELECOM shall have no responsibility to ensure that any switched access customer will accept traffic that CLEC directs to the switched access customer.
- 2.7 CLEC shall provide all SS7 signaling information including, without limitation, charge number and originating line information (OLI). For terminating FGD, TDS TELECOM will pass all SS7 signaling information including, without limitation, CPN if it receives CPN from FGD carriers. All privacy indicators will be honored. Where available, network signaling information such as transit network selection (TNS) parameter, carrier identification codes (CIC) (CCS platform) and CIC/OZZ information (non-SS7 environment) will be provided by CLEC wherever such information is needed for call routing or billing. The Parties will follow all OBF adopted standards pertaining to TNS and CIC/OZZ codes.

### **3. FORECASTING RESPONSIBILITIES**

- 3.1 CLEC agrees to provide an initial forecast for establishing the initial Interconnection facilities. TDS TELECOM shall review this forecast, and if it has any additional information that will change the forecast shall provide this information to CLEC. The Parties recognize that, to the extent historical traffic data can be shared between the Parties, the accuracy of the forecasts will improve. CLEC shall provide subsequent forecasts on an annual basis. CLEC forecasts should include yearly forecasted trunk quantities for all appropriate trunk groups

described in this Appendix for a minimum of three years. Forecasts shall be non-binding on both TDS TELECOM and CLEC. TDS TELECOM shall take CLEC's forecasts into consideration in its network planning, and shall exercise its best efforts to provide the quantity of interconnection trunks and facilities forecasted by the CLEC. However, the development and submission of forecasts shall not replace the ordering process in place for interconnection trunks and facilities, and the provision of the forecasted quantity of interconnection trunks and facilities is subject to capacity existing at the time the order is submitted. Furthermore, the development and receipt of forecasts does not imply any liability for failure to perform if capacity is not available for use at the forecasted time. The Parties agree to the use of Common Language Location Identification (CLLI) coding and Common Language Circuit Identification for Message Trunk coding (CLCI-MSG) which is described in TELCORDIA TECHNOLOGIES documents BR795-100-100 and BR795-400-100 respectively. Inquiries pertaining to use of TELCORDIA TECHNOLOGIES Common Language Standards and document availability should be directed to TELCORDIA TECHNOLOGIES at 1-800-521-2673. Analysis of trunk group performance, and ordering of relief if required, will be performed on a monthly basis at a minimum (trunk servicing).

- 3.2 The annual forecasts shall include:
  - 3.2.1 Yearly forecasted trunk quantities (which include measurements that reflect actual, End Office Local Interconnection trunks, and Tandem subtending Local Interconnection End Office equivalent trunk requirements) for a minimum of three (current and plus 1 and plus 2) years; and
  - 3.2.2 A description of major network projects anticipated for the following six (6) months. Major network projects include trunking or network rearrangements, shifts in anticipated traffic patterns, orders greater than four (4) DS1's, or other activities that are reflected by a significant increase or decrease in trunking demand for the following forecasting period.
- 3.3 The Parties shall agree on a forecast provided above to ensure efficient utilization of trunks. Orders for trunks that exceed forecasted quantities for forecasted locations will be accommodated as facilities and/or equipment becomes available. Parties shall make all reasonable efforts and cooperate in good faith to develop alternative solutions to accommodate orders when facilities are not available.
- 3.4 CLEC shall be responsible for forecasting two-way trunk groups. TDS TELECOM shall be responsible for forecasting and servicing the one-way trunk groups terminating to CLEC and CLEC shall be responsible for forecasting and servicing the one-way trunk groups terminating to TDS TELECOM, unless

otherwise specified in this Appendix. Standard trunk traffic engineering methods will be used by the Parties.

- 3.5 If forecast quantities are in dispute, the Parties shall meet, either in person or via conference call, to reconcile the differences.
- 3.6 Each Party shall provide a specified point of contact for planning, forecasting and trunk servicing purposes.

#### 4. TRUNK DESIGN BLOCKING CRITERIA

- 4.1 Trunk requirements for forecasting and servicing shall be based on the blocking objectives shown in Table 1. Trunk requirements shall be based upon time consistent average busy season busy hour twenty-one (21) day averaged loads applied to industry standard Neal-Wilkinson Trunk Group Capacity algorithms (use Medium day-to-day Variation and 1.0 Peakedness factor until actual traffic data is available).

TABLE 1

<u>Trunk Group Type</u>	<u>Design Blocking Objective</u>
Local Direct End Office (Primary High)	as mutually agreed upon
Local Direct End Office (Final)	1%

#### 5. TRUNK SERVICING

- 5.1 Orders between the Parties to establish, add, change or disconnect trunks shall be processed by using an Access Service Request (ASR). CLEC will have administrative control for the purpose of issuing ASR's on two-way trunk groups. Where one-way trunks are used (as discussed in section 2.3.2), TDS TELECOM will issue ASRs for trunk groups for traffic that originates from TDS TELECOM and terminates to CLEC. The Parties agree that neither Party shall alter trunk sizing without first conferring with the other Party.
- 5.2 Both Parties will jointly manage the capacity of Local Interconnection Trunk Groups. Either Party may send a Trunk Group Service Request (TGSR) to the other Party to trigger changes to the Local Interconnection Trunk Groups based on capacity assessment. The TGSR is a standard industry support interface developed by the Ordering and Billing Forum of the Carrier Liaison Committee of the Alliance for Telecommunications Solutions (ATIS) organization. TELECORDIA TECHNOLOGIES Special Report STS000316 describes the format and use of the TGSR. The forms can be obtained from [www.atis.org/atis/clc/obf/download.htm](http://www.atis.org/atis/clc/obf/download.htm).



5.3 In A Blocking Situation:

- 5.3.1 In a blocking final situation, a TGSR will be issued by TDS TELECOM when additional capacity is required to reduce measured blocking to objective design blocking levels based upon analysis of trunk group data. Either Party upon receipt of a TGSR in a blocking situation will issue an ASR to the other Party within three (3) business days after receipt of the TGSR, and upon review and in response to the TGSR received. CLEC will note "Service Affecting" on the ASR.

5.4 Underutilization:

- 5.4.1 Underutilization of Interconnection trunks and facilities exists when provisioned capacity is greater than the current need. This over provisioning is an inefficient deployment and use of network resources and results in unnecessary costs. Those situations where more capacity exists than actual usage requires will be handled in the following manner:

5.4.1.1 If a trunk group is under 75 percent (75%) of CCS capacity on a monthly average basis, for each month of any three (3) consecutive months period, either Party may request the issuance of an order to resize the trunk group, which shall be left with not less than 25 percent (25%) excess capacity. In all cases grade of service objectives shall be maintained.

5.4.1.2 Either Party may send a TGSR to the other Party to trigger changes to the Local Interconnection Trunk Groups based on capacity assessment. Upon receipt of a TGSR the receiving Party will issue an ASR to the other Party within twenty (20) business days after receipt of the TGSR.

5.4.1.3 Upon review of the TGSR if a Party does not agree with the resizing, the Parties will schedule a joint planning discussion within twenty (20) business days. The Parties will meet to resolve and mutually agree to the disposition of the TGSR.

5.4.1.4 If TDS TELECOM does not receive an ASR, or if CLEC does not respond to the TGSR by scheduling a joint discussion within the twenty (20) business day period, TDS TELECOM will attempt to contact CLEC to schedule a joint planning discussion. If CLEC will not agree to meet within an additional five (5) business days and present adequate reason for keeping trunks operational, TDS TELECOM will issue an ASR to resize the Interconnection trunks and facilities.



- 5.4.2 In all cases except a blocking situation, either Party upon receipt of a TGSR will issue an ASR to the other Party:
- 5.4.3 Within twenty (20) business days after receipt of the TGSR, upon review of and in response to the TGSR received.
- 5.4.4 At any time as a result of either Party's own capacity management assessment, in order to begin the provisioning process. The Parties will mutually agree upon intervals used for provisioning trunk groups.
- 5.5 Projects require the coordination and execution of multiple orders or related activities between and among TDS TELECOM and CLEC work groups, including but not limited to the initial establishment of Local Interconnection or Meet Point Trunk Groups and service in an area, NXX code moves, re-homes, facility grooming, or network rearrangements.
  - 5.5.1 Orders greater than four (4) DS-1's, shall be submitted at the same time, and their implementation shall be jointly planned and coordinated.
- 5.6 CLEC will be responsible for engineering its network on its side of the Point of Interconnection (POI). TDS TELECOM will be responsible for engineering its network on its side of the POI.
- 5.7 Where facilities are available, due dates for the installation of Local Interconnection Trunks covered by this Appendix shall be no longer than twenty-one (21) days from receipt of a request by either Party. If either CLEC or TDS TELECOM is unable to or not ready to perform Acceptance Tests, or is unable to accept the Local Interconnection Service Arrangement trunk(s) by the due date, the Parties will reschedule the date no more than seven (7) days from the original date.
- 5.8 Utilization shall be defined as Trunks Required as a percentage of Trunks In Service. Trunks Required shall be determined using methods described in Section 3 using Design Blocking Objectives stated in section 4.1.

## **6. TRUNK DATA EXCHANGE**

- 6.1 Each Party agrees to service trunk groups to the foregoing blocking criteria in a timely manner when trunk groups exceed measured blocking thresholds on an average time consistent busy hour for a twenty-one (21) day study period. The Parties agree that twenty-one (21) days is the study period duration objective. However, a study period on occasion may be less than twenty-one (21) days but at minimum must be at least three (3) business days to be utilized for engineering purposes, although with less statistical confidence.

- 6.2 Exchange of traffic data enables each Party to make accurate and independent assessments of trunk group service levels and requirements. Parties agree to establish a timeline for implementing an exchange of traffic data. Implementation shall be within three (3) months of the date, or such date as agreed upon, that the trunk groups begin passing live traffic. The traffic data to be exchanged will be the Originating Attempt Peg Count, Usage (measured in Hundred Call Seconds), Overflow Peg Count, and Maintenance Usage (measured in Hundred Call Seconds) on a seven (7) day per week, twenty-four (24) hour per day, fifty-two (52) weeks per year basis. These reports shall be made available at a minimum on a semi-annual basis upon request. Exchange of data on one-way groups is optional.

## 7. NETWORK MANAGEMENT

### 7.1 Restrictive Controls

- 7.1.1 Either Party may use protective network traffic management controls such as 7-digit and 10-digit code gaps set at appropriate levels on traffic toward each other's network, when required, to protect the public switched network from congestion due to facility failures, switch congestion, or failure or focused overload. CLEC and TDS TELECOM will immediately notify each other of any protective control action planned or executed.

### 7.2 Expansive Controls

- 7.2.1 Where the capability exists, originating or terminating traffic reroutes may be implemented by either Party to temporarily relieve network congestion due to facility failures or abnormal calling patterns. Reroutes will not be used to circumvent normal trunk servicing. Expansive controls will only be used when mutually agreed to by the Parties.

### 7.3 Mass Calling

- 7.3.1 CLEC and TDS TELECOM shall cooperate and share pre-planning information regarding cross-network call-ins expected to generate large or focused temporary increases in call volumes.